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10/612,397	07/01/2003	Katri Narhi	915-001.015	3212

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EXAMINER

CARPIO, IVAN HERNAN

ART UNIT PAPER NUMBER

2841

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,397

Applicant(s)

NARHI ET AL.

Examiner

Ivan H. Carpio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaikuranta (US Patent 6633241).

With respect to claim 1 Kaikuranta teaches an electromechanical assembly (Fig. 5b and 18, elements 502') for an electronic device (Fig. 5b and 18, element 501'), the electromechanical assembly comprising at least a printed wire foil (Fig. 7, element 703, 704 and 705) and means for electrically connecting (Fig. 6 and column 6, lines 30-56 and Fig. 7, elements 709 and 710) the electromechanical assembly to the electronic device, the electronic device comprising at least one cover part (Fig. 5b and 18, element 502) and means for mechanically connecting (column 11, lines 65-67 and column 12 lines 1-3) the cover part to the electronic device, wherein the electromechanical assembly and the cover part are arranged to compose an integrated

combination (column 11, lines 61-65 and column 12, lines 26-38) which is detachable from the electronic device.

With respect to claim 2 and with all the limitations of claim 1, Kaikuranta teaches the electromechanical assembly is integrated into the cover part to compose an integrated combination (column 11, lines 61-65 and column 12, lines 26-38) which is detachable from the electronic device.

With respect to claim 3 and with all the limitations of claim 2, Kaikuranta teaches that the printed wired foil is separated from the engine printed wired board (column 4, lines 26-28 or column 12, lines 26-38) of the electronic device.

With respect to claim 4 and with all the limitations of claim 2, Kaikuranta teaches the printed wired foil comprises: wiring (Fig. 7, element 703 the wiring between circular contact points) to provide electrical connections to contact points and between the contact points for components of the electromechanical assembly and to contact points (Fig. 7, element 703 the circular contact points and elements 706,707,and 708 Note. The contact points 706-708 are electrically connected to the contact points on element 703 through connecting element means 709 and 710) electrically connecting by connecting means the electromechanical assembly to the electronic device, isolation layers (Fig. 7, element 704), decorations (Fig. 7, the wiring pattern or the color are decorations), and electronic (Fig. 7, element 703 the flat strips connecting the circular contact point act as resistive component) and mechanical components (Fig. 7, element 705, the semi-spherical projections) mounted on the appropriate contact points onto the printed wired foil.

With respect to claim 10 and with all the limitations of claim 2, Kaikuranta teaches that the cover part is exchangeable (column 11, lines 61-65).

With respect to claim 11 and with all the limitations of claim 2, Kaikuranta teaches that the electronic device is a mobile phone (Fig. 18).

With respect to claim 12 Kaikuranta teaches a cover part (Fig. 5b and 18, elements 502') for an electronic device (Fig. 5b and 18, element 501'), the electronic device comprising an electromechanical assembly (Fig. 5b and 18, element 502) which comprises at least a printed wire foil (Fig. 7, element 703, 704 and 705) and connecting means for electrically connecting (Fig. 6 and column 6, lines 30-56 and Fig. 7, elements 709 and 710) the electromechanical assembly to the electronic device, and the electronic device still comprising means for mechanically connecting (column 11, lines 65-67 and column 12 lines 1-3) the cover part, wherein the electromechanical assembly and the cover part are arranged to compose an integrated combination (column 11, lines 61-65 and column 12, lines 26-38) which is detachable from the electronic device.

With respect to claim 13 and with all the limitations of claim 12, Kaikuranta teaches that the electromechanical assembly is integrated into the cover part to compose an integrated combination (column 11, lines 61-65 and column 12, lines 26-38) which is detachable from the electronic device.

With respect to claim 14 and with all the limitations of claim 13, Kaikuranta teaches that the electromechanical assembly is a keypad (Fig. 5b and 18 element 502') assembly.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaikuranta.

With respect to claim 5 and with all the limitations of claim 4, Kaikuranta teaches connecting means (Fig. 6 and column 6, lines 30-56 and Fig. 7, elements 709 and 710) connecting the electromechanical assembly to the electronic device. Kaikuranta does not teach that the connecting means are soldered or glued to the contact points, but soldering and gluing are very well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to solder elements 709 and 710 to the contact point because if the strips were to go defective one could readily change them without having to change the entire set of contact points and wirings 703.

With respect to claim 6 and with all the limitations of claim 5, Kaikuranta teaches that the electromechanical assembly is an input device (Fig. 18, element 502', Fig. 7, element 705) assembly comprising at least an input device connected to a printed wired foil and means for electrically connecting the input device assembly to the

electronic device, wherein the input device assembly is integrated into the cover part to compose an integrated combination (column 11, lines 61-65 and column 12, lines 26-38) which is detachable from the electronic device.

With respect to claim 7 and with all the limitations of claim 5, Kaikuranta teaches the electromechanical assembly is a keypad (Fig. 5b and 18 element 502') assembly comprising at least a keypad (Fig. 7, element 705) connected to a printed wired foil and means for electrically connecting (Fig. 6 and column 6, lines 30-56 and Fig. 7, elements 709 and 710) the keypad assembly to the electronic device, wherein the keypad assembly is integrated into the cover part to compose an integrated combination (column 11, lines 61-65 and column 12, lines 26-38) which is detachable from the electronic device.

With respect to claim 8 and with all the limitations of claim 5, Kaikuranta teaches that the printed wired foil comprises wiring (Fig. 7, 703 the wiring between circular contact points; Note that if you push in a key for example "1" the wiring provides a signal to the engine pcb (element 701) which then runs through some circuit eventually outputting a number 1 to the display giving a tactile feedback.) to provide contact points electrically connecting the electromechanical assembly to a tactile feed back component of the electronic device.

With respect to claim 9 and with all the limitations of claim 8, Kaikuranta teaches that the electromechanical assembly is a touch sensor (Fig. 5b and 18 element 502') assembly comprising at least a touch sensor (Fig. 7, element 705) connected to a printed wire foil and means for electrically connecting (Fig. 6 and column 6, lines 30-56

and Fig. 7, elements 709 and 710) the touch sensor assembly to the electronic device, wherein the touch sensor assembly is integrated into the cover part to compose an integrated combination (column 11, lines 61-65 and column 12, lines 26-38) which is detachable from the electronic device.

Claim 15-18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaikuranta in view of Yoneda (Pub. No. 2003/0075825 a1).

With respect to claim 15 and with all the limitations of claim 14, Kaikuranta teaches all of the limitations except that the cover part is manufactured by injection molding. Yoneda teaches a mobile phone cover manufactured by injection molding (paragraph [0014]). It would have been obvious to one of ordinary skill in the art at the time of the invention to manufacture the cover part taught by Kaikuranta by the injection molding method taught by Yoneda because the technique is well known in the art and mass producing by injection molding would produce identical cover parts.

With respect to claim 16 and with all the limitations of claim 15, Kaikuranta does not teach that the electromechanical assembly arranged to be an insert during the injection molding process. Yoneda teaches an electromechanical assembly arranged to be an insert during the injection molding process (paragraph [0009]). It would have been obvious at the time of the invention to make the electromechanical assembly taught by Kaikuranta, to be an insert during injection molding process as taught by Yoneda, because doing so isolates the electromechanical assembly from the other

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electronics of the engine pcb thereby eliminating the chances of a short circuit occurring and causing a malfunction to occur.

With respect to claim 17 and with all the limitations of claim 16, Kaikuranta teaches a cover part that is exchangeable (column 11, lines 61-65).

With respect to claim 18 and with all the limitations of claim 17, Kaikuranta teaches that the electronic device is a mobile phone (Fig. 18).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 5576981 discloses an exchangeable cover part for an electronic device. US Patent 6504928 discloses an injection molded mobile phone cover with decorative film. US Patent 6172620 discloses a modular, exchangeable keypad for an electronic device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ivan H. Carpio whose telephone number is 571-272-8396. The examiner can normally be reached on M-R 6:00am - 4:30pm.

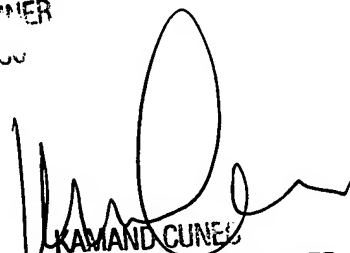
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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